The unique specimen, a female, was brought alive to Capt. Flower at Cairo five years ago by Ismail Bey Chakir, and has now been sent to me by the former with the remark that it may possibly be of European origin, the Bey having bought the newt from a dealer in Vienna. But it is quite distinct from any European newt, being more nearly related to *Molge crocata* (*Neurergus crocatus*, Cope, *Molge strauchi*, Stdr.) from Asia Minor, and unquestionably represents an undescribed species.

The specimen has been presented by Capt. Flower to the British Museum.

EXPLANATION OF PLATE IV.

Molge macrosoma, female, natural size, with enlarged view of palate.

VI.—*Amphipoda from the Auckland Islands.*

By Alfred O. Walker, F.L.S., F.Z.S.

[Plate V.]

On the return of the National Antarctic Expedition to New Zealand in March 1904 the Aucklands were used as a rendezvous for the vessels of which it was composed. During the stay of the 'Discovery' Mr. Hodgson took the opportunity of making a collection of Amphipoda, with the results given below. The arrangement is that of Mr. Stebbing in 'Das Tierreich.'

Fam. **Lysianassidæ.**

Genus Lysianassa ?, M.-Edw.

A single female or young specimen, length 4·5 mm., remarkable for the structure of the third uropods: these are small and have the peduncle elevated near the middle in a subtriangular ridge; the outer ramus is very small, with a terminal joint, the inner rudimentary. The telson is square, entire, concave, and curved upwards, with a spine at each of the free angles. In other respects, as far as can be judged without dissection, the animal is a *Lysianassa*.

Fam. **Pontogeneiidæ.**

Genus Atyloides, Stebbing.

Atyloides aucklandicus, sp. n. (Pl. V. figs. 1, 2.)

Laurie Harbour: two specimens and the anterior half of a smaller one.

Third pleon-segment with the hind epimeral margin convex; posterior angle produced in a small tooth, above which is a minute denticle.

Eyes irregularly oval, oblique, large, and dark.

Antenna 1 rather longer than 2, about half as long as the body; appendage 1-jointed, shorter than the first joint of the flagellum.

Antenna 2: peduncle rather longer than that of antenna 1; second joint shorter than third.

Maxilla 1: inner plate with 7 setæ, diminishing in length downwards.

First gnathopods: side-plates wide-oblong, with rounded angles, not distally widened, the front margin slightly concave; second joint subequal to the hand, strong; wrist subequal to the hand in length and width, triangular, not cup-shaped, very setose behind; hand oval, palm undefined, with setiferous ridges on both margins. Dactylus about one-third as long as the hind margin.

In the young specimen the wrist is only one-third as long and half as wide as the hand, not much produced behind; the hand is wide-oval, the palm distinctly defined by an obtuse angle and a group of strong spines and as long as the hind margin. Dactylus slender, as long as the palm.

The second gnathopods are like the first, but larger.

Peræopods 3–5 with second joint wide-oval, faintly serrate behind.

Telson about as long as the sixth pleon-segment, rather longer than the width at the base, cleft fully two-thirds of its length, ends of divisions rounded, slightly dehiscent; an upright spine near the middle of the outer margin and another near the end.

Length 10 mm.

Distinguished by the form of the gnathopods and telson. The difference between the former in old and young is remarkable; the specimens agree in other respects, and appear to have been taken together, but unfortunately the whole pleon is wanting in the small specimen.

Paramœra austrina (Bate), var.

Terror Cove, Port Ross, 16/3/04. One female, with ova; length 7·5 mm.

Differs from the forms described in the 'Challenger' Report under the names of *Atyloides australis* (Miers) and *A. assimilis*, Stebbing, in the third pleon-segment, which has the hind epimeral margin forming a semicircle with the

lower margin without teeth, and the telson which is not much longer than wide at the base and cleft for one-third of its length with the ends of the divisions rounded.

Genus AUCKLANDIA, nov.

Antenna 1 shorter than antenna 2, with short accessory flagellum.

Gnathopods dissimilar.

Otherwise as *Paramœra*.

Aucklandia enderbyi, sp. n. (Pl. V. figs. 3, 4.)

Enderby I., 19/3/04. One female with ova; length 10 mm.

Head without rostrum. Ocular lobe rounded. Eyes large, dark, long-reniform. Pleon-segment 3 : postero-lateral angle obtuse, hind and lower margins straight.

Antenna 1 : flagellum long and slender, the first joint as long as the next three, the following joints increasing in length successively; accessory appendage one-jointed, half as long as the first joint of the flagellum, subconical, with two long terminal setæ.

Antenna 2 : peduncle considerably longer than that of antenna 1, second and third joints subequal ; flagellum more slender than in antenna 1.

Gnathopod 1 : side-plate oblong, rounded below, width two-thirds of length, rather concave in front. Limb robust, second joint about as long as fifth and sixth united and as wide as the fifth ; fourth prominent, with convex hind margin ; wrist rather longer than the hand, with setiferous ridges on the hind margin ; hand widening abruptly below the palm, which is rectangularly transverse and defined by a spinous prominence, outside of which is a scabrous border extending some distance down the hind margin. Finger short, barely reaching the prominence.

Gnathopod 2 : more than one-third longer than gnath. 1 ; second joint subequal to the next three and as wide as the fifth ; this is subequal to the hand in length and width ; hand narrow-oblong, more than twice as long as wide, with fascicles of pectinate setæ on the hind margin ; palm obliquely transverse, defined as in gnath. 1, but the prominence smaller. Finger as in gnath. 1.

Peræopod 2 : side-plate almost as wide as deep; about half of the hind margin excavate ; second joint narrow.

Peræopods 3–5 : second joints wide-oval, obscurely serrate behind.

Uropod 1: peduncle nearly twice as long as the subequal rami.

Uropod 2: outer ramus shorter than inner, which is shorter than the peduncle.

Uropod 3 extending much beyond 2; rami subequal, longer than the peduncle, spiniferous.

Telson not much longer than the width at the base, cleft two-thirds of its length, ends of divisions rounded, dehiscent.

Characterized by the structure of the gnathopods.

Fam. **Talitridæ.**

Genus Orchestia.

Orchestia aucklandiæ, Sp. Bate, Cat. Amph. Crust. Brit. Mus. p. 17, pl. i. *a*, 3.

Enderby I., 19/3/04. Many males and females.

Segments of the peræon smooth, without transverse ridges. Hind epimeral margin of the third pleon-segment straight; obtusely serrate, with spinules between the teeth; hind angle right, a little produced backwards.

Eyes round-oval, the longer diameter subequal to that of the base of ant. 2.

Ant. 1 not quite reaching the end of the penultimate joint of the peduncle of ant. 2; flagellum in the male with 4 subequal joints, in the female 3-jointed, the first the longest.

Ant. 2: last joint of peduncle the longest; flagellum rather longer than the peduncle, 18-jointed in both sexes.

Gnathopod 1, ♂: side-plate narrowed and rounded below. Wrist twice as long as the hand, both joints with a prominent pellucid process; that on the hand forming the palm and furnished with a row of small spines. Finger reaching a little beyond the process. In the female the limb is similar, but slighter, and the pellucid processes much less prominent.

Gnathopod 2, ♂: wrist short, not produced behind; hand almost as wide as long; palm transverse, rather oblique, in one specimen slightly convex in the middle, in another with a distinct concavity near the base of the finger, spinulose and defined by a strong tooth, hind margin subequal to the palm. Finger nearly straight, extending beyond the tooth.

Gnathopod 2, ♀: wrist longer than the hand, a pellucid process on both, that of the hand with a double row of spines on the upper part and a single row at the base of the dactylus, which does not reach the end of the process.

Peræopod 1 longer than 2; in both the second joints are about twice as wide as the fourth; dactylus divided by a false joint, the proximal part constricted.

Peræopod 3 almost reaching the end of the fifth joint of per. 4; second joint wide-oval, obscurely serrate and rounded behind.

Peræopod 4 shorter than 5 which has the second joint angulate and slightly serrate behind, fourth and fifth joints not enlarged in male.

All the limbs are sparsely covered with short spines.

Telson spoon-shaped, slightly truncate, with spinous margins.

Length of male 20 mm.; female 15 mm.

This species is treated in the 'Tierreich' as identical with *O. serrulata*, Dana, which is described as having the peræon-segment "encircled by a raised ridge," and gnathopod 1 in the female as having the sixth joint "slightly *narrower* at apex than base." In Spence Bate's description this limb is said to differ from the male "in being longer and slighter," and his figure agrees with the specimen described in having the sixth joint distinctly *wider* at the apex; the animal is said to be "very smooth." But for the absence of the expansion of the fourth and fifth joints in peræopod 5 of the male (and it is by no means certain that the specimens examined were sexually adult) this species might well be referred to *O. gammarellus*, Pallas [= *O. littorea* (Mont.)].

Genus Hyale, Rathke.

Hyale trigonochir *, sp. n. (Pl. V. figs. 5–7.)

Enderby I., east of Bay. Many males; four females.

Peræon-segments subequal; pleon-segments diminishing in length successively, the third with hind margin rather concave and obscurely crenate, lower margin rather convex, angle subacute. First four side-plates as deep as the segments. Head longer than first segment. Eyes moderate, oblong, widening below.

Male.—Antenna 1 reaching a little beyond the end of the peduncle of ant. 2, about as long as the head; flagellum longer than peduncle, 12-jointed.

Antenna 2 reaches almost to the third body-segment, third joint the longest; peduncle and first fifteen joints of flagellum densely setose beneath; flagellum almost twice as long as the peduncle, 20-jointed.

Gnathopod 1: side-plate about as wide as long, widening and rounded below. Second joint very stout; wrist more than half as long as the hand and two-thirds of the width of

* In allusion to the triangular hand of gnathopod 1 in the male.

its base, the front and hind margins subparallel, the latter with a spinous tubercle; hand subtriangular, palm very oblique, straight, setose and spinous, and defined by two stout spines; hind margin about one-fourth as long as the palm, with which it forms a rounded and setose angle. Dactylus very stout, about two-thirds as long as the palm.

Gnathopod 2: side-plate suborbicular. Second joint longer than third and fourth united; wrist very small, not produced behind; hand obpyriform, the width near the base nearly three-fourths of the length; palm undefined; hind margin almost straight, but swollen and rounded at the base, densely setose. Dactylus about half as long as the hind margin.

Female (with ova).—Antenna 1 reaching the end of the fourth joint of the flagellum of ant. 2; flagellum 12-jointed.

Gnathopod 1: side-plate rounded below, with a prominent tooth on the upper part of the hind margin. Second joint stout, rather longer than the next two; wrist less than half as large as the hand, the hind margin slightly produced; hand subovoid, front margin very convex, about twice as long as the hind; palm oblique, shorter than the hind margin. Dactylus as long as the palm.

Gnathopod 2: side-plate and whole limb like gnathopod 1, but rather larger.

Peræopod 2: second joint narrow, fourth twice as wide as the fifth. Branchial vesicle wide-ovate.

Peræopod 5: second joint as wide as long, fourth and fifth joints widening distally and terminated by a fringe of spines.

Uropod 3: ramus subequal to peduncle, 3 or 4 distal spines on each.

Telson divided to the base; divisions quadrate, with rounded angles.

Length of male 20 mm.; female 12 mm.

The form of gnathopod 1 in the male is the most salient character.

Genus Allorchestes, Dana.

Allorchestes novizealandiæ, Dana.

Enderby I., 19/3/04. Two males; length 12 mm.

It is difficult to see why Prof. Della Valle (and, doubtless following him, Mr. G. M. Thompson *) should have referred this species to *Hyale prevostii*, M.-Edw. The structure of the wrist in gnathopod 2, ♂, proves it to be an *Allorchestes*.

* Trans. N. Z. Inst. 1898, vol. xxxi. pp. 197–207.

EXPLANATION OF PLATE V.

Fig. 1. *Atyloides aucklandicus*, sp. n. First gnathopod.
Fig. 2. Ditto, young. First gnathopod.
Fig. 3. *Aucklandia enderbyi*, sp. n. First gnathopod.
Fig. 4. Ditto. Second gnathopod.
Fig. 5. *Hyale trigonochir*, sp. n. First gnathopod, male.
Fig. 6. Ditto. Second gnathopod, male.
Fig. 7. Ditto. Second gnathopod, female.

VII.—*A Synopsis of the Sharks of the Family* Squalidæ.

By C. Tate Regan, M.A.

The Squalidæ may be diagnosed as sharks without an anal fin, with five or six gill-openings on each side, the last in front of the base of the pectoral fin, which is normally shaped, and with the mouth inferior.

Fourteen genera may be recognized.

Synopsis of the Genera.

I. Snout normal, not produced into a saw-like rostrum. (*Squalinæ.*)

A. Mouth crescentic.

Each dorsal fin preceded by a spine	1. *Centroscyllium.*
No fin-spines	2. *Echinorhinus.*

B. Mouth transverse, but little arched, with a straight oblique groove on each side.

1. Mouth rather small; body trihedral, the flat lower surface margined on each side by a strong dermal fold; dorsal fin-spines present ..... 3. *Oxynotus.*

2. Mouth wide; body elongate, subcylindrical.

a. Each dorsal fin preceded by a spine, which may project or may be small and concealed.

Teeth in the upper jaw erect, tricuspid or pentacuspid; lower teeth oblique, unicuspid, with points strongly deflected laterally	4. *Spinax.*
Teeth in both jaws oblique, unicuspid, with points strongly deflected laterally	5. *Squalus.*
Upper teeth erect, lanceolate, two-rooted: lower teeth erect, triangular	6. *Scymnodon.*
Upper teeth erect, lanceolate, two-rooted; lower teeth oblique, with points deflected laterally..	7. *Centroscymnus.*
Upper teeth erect or somewhat oblique, triangular, with quadrate bases; lower teeth oblique, with points deflected laterally	8 *Centrophorus.*